



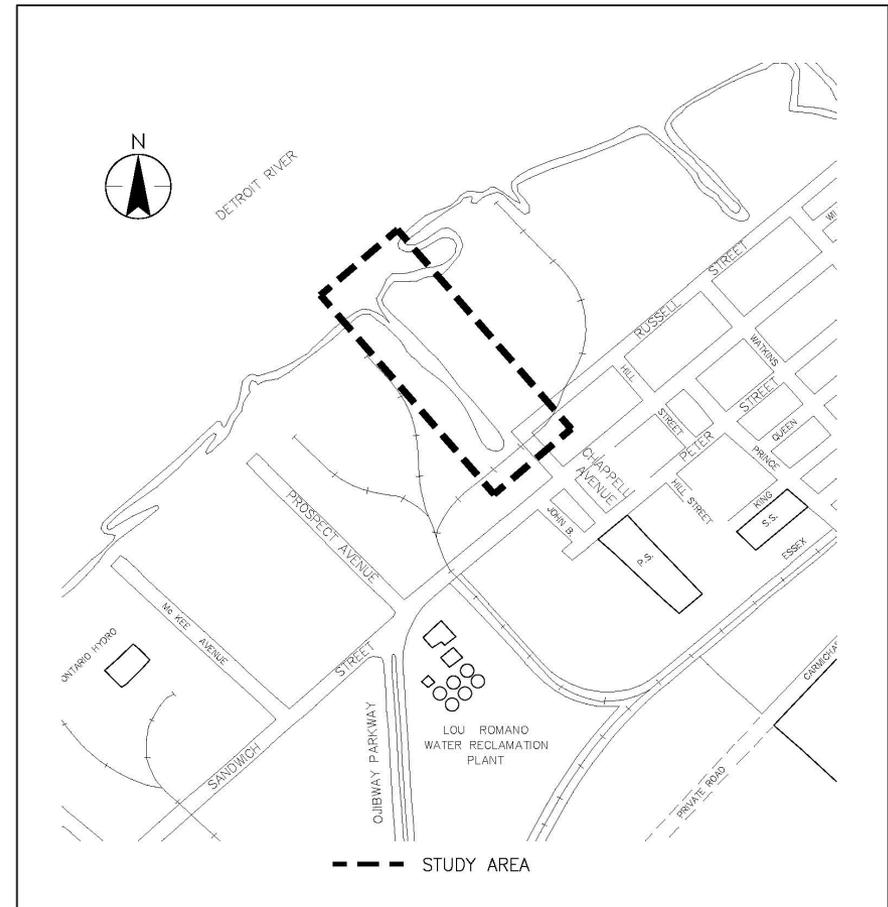
City of Windsor
Prince Road Storm Sewer Outlet
Schedule 'C' Municipal Class
Environmental Assessment

Project Update



Study Area

The study area is defined to the west by the Detroit River, to the east by the west limit of the existing storm sewer along Chappell Avenue, and to the north and south on either side of McKee Creek by lands owned by Russell Street Property Holdings Inc.



Existing Drainage Systems

The City of Windsor has three types of existing drainage systems:

Sanitary sewer systems

- Conveys domestic sewage via local service connections from residential, commercial, industrial, institutional and other land uses to a wastewater treatment plant where it is filtered, treated and discharged.
- The City of Windsor has two major sanitary outlets including Lou Romano Water Reclamation Plant, and Little River Pollution Control Plant.

Storm sewer systems

- Collect and convey rainwater to open watercourses such as the Detroit River. Rainwater enters the storm system at various sources, including catchbasins and private storm connections.

Combined sewer systems

- Convey stormwater runoff, sanitary sewage, and industrial wastewater in a single pipe. Under dry-weather conditions, all flows are conveyed to the downstream treatment plant. Under wet weather conditions, stormwater runoff sometimes exceeds the combined sewer's capacity, resulting in overflow to the Detroit River or other waterways.

Problems & Opportunities

The following problems have been identified within the existing drainage system:

Capacity – Exceedances of flow capacity in storm, sanitary and combined sewers due to the excess rainwater entering the municipal drainage system.

Public Health – Issues of nuisance, potential health risks, and environmental degradation from flooding conditions.

Overland Flow – Issues of surface water directed towards habitable structures.

Transportation Access – Issues of limiting access due to coastal flooding and stormwater ponding impacting roads.

Future Development Capacity – Limited sewer capacity reducing opportunities for new development.

The following opportunity was identified to address key issues:

Make improvements to reduce the flooding risks in the existing drainage systems and improve conveyance of flows during severe rain events.

Background Studies

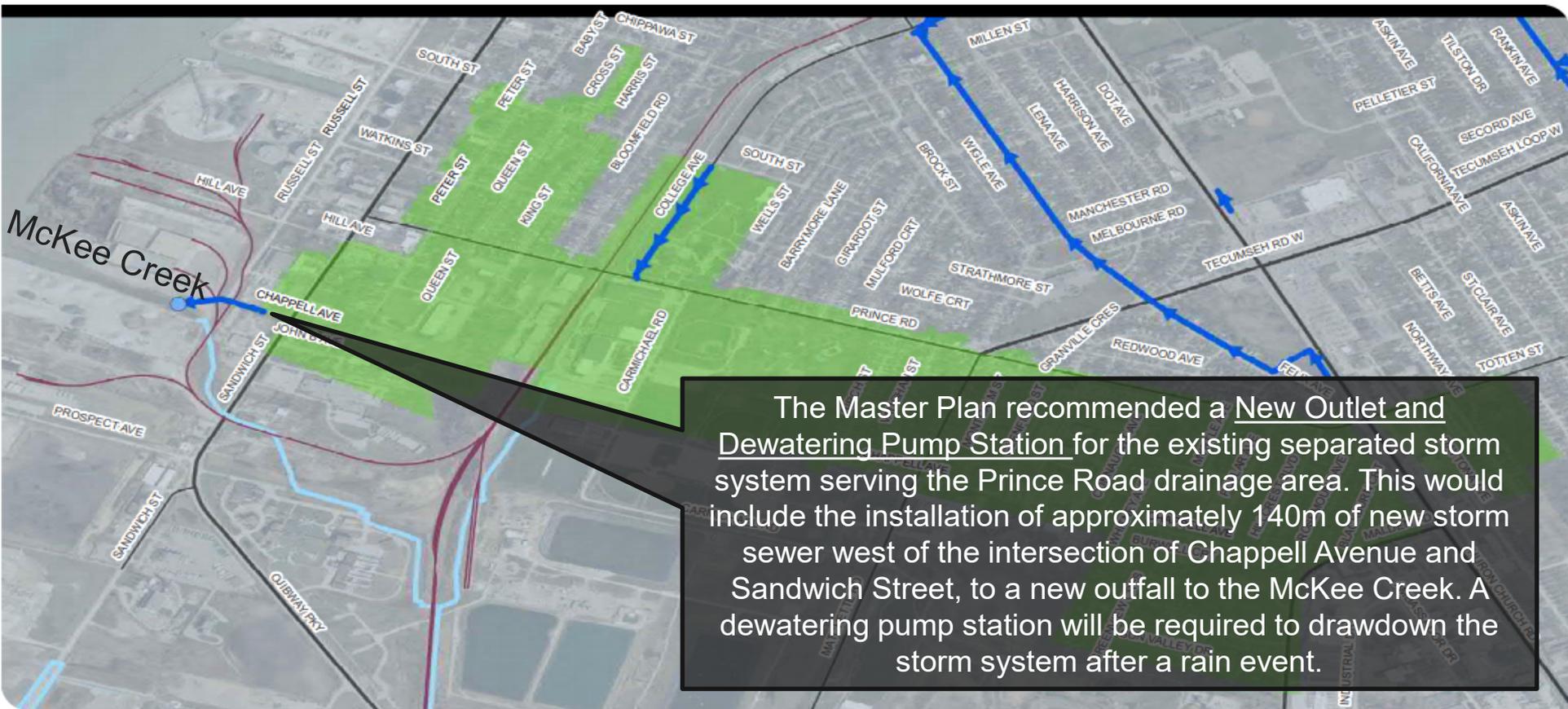
The Prince Road Sewer Study (2001) was the guiding document for the design of this sewershed's combined sewer separation. The study recommended construction of the Prince Road trunk sewer to its current location on Chappell Avenue between Sandwich Street and Russell Street.

In 2020, City of Windsor completed Sewer & Coastal Flood Protection Master Plan (SCFPMP) to understand the cause of widespread floods throughout the City and to identify and evaluate short-term and long-term solutions to mitigate the issue.

The Master Plan recommended that the Prince Road storm sewer at Chappell Avenue is to outlet to McKee Creek.

Recommended Solution

from the Sewer & Coastal Flood Protection Master Plan (SCFPMP), 2020



CITY OF WINDSOR
SEWER AND COASTAL FLOOD
PROTECTION MASTER PLAN

Alternative - Prince Trunk Storm
Sewer Outlet (STM-C1, STM-C9)

Figure 6-8



- EXPRESSWAY AND ARTERIAL ROADS
- CLASS 1 AND 2 COLLECTOR ROADS
- RAILWAY
- MUNICIPAL DRAINS
- PRINCE ROAD PROPOSED DRAINAGE AREA
- PROPOSED NEW OR UPGRADED STORM SEWERS
- PROPOSED NEW STORM SEWER OUTFALL



M&P CREATED BY EDV
M&P CHECKED BY LHM
M&P PRODUCTION: MAR 2003 LTM 2006 17%

SCALE 1:10,500

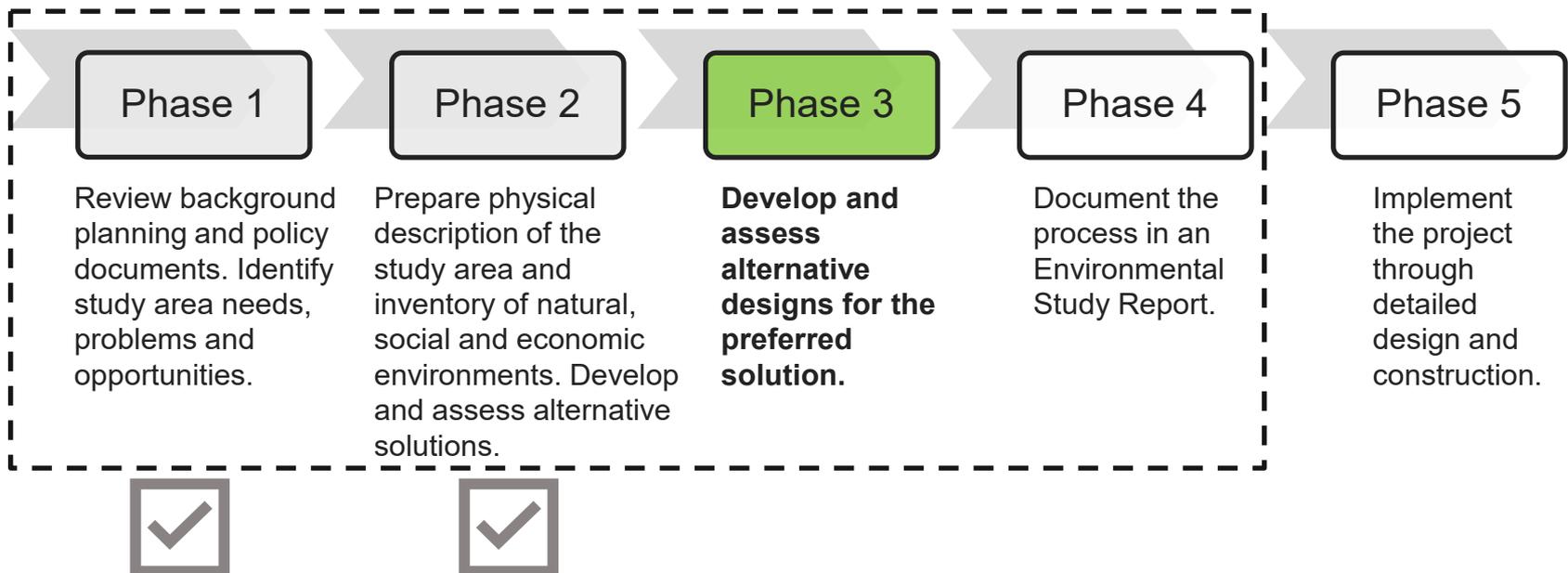


PROJECT: 17-4638 STATUS: FINAL DATE: October 2020

Municipal Class EA Process

The purpose of this Schedule C Class EA study is to establish a preferred location and design of the outlet and the associated pumping station.

The Master Plan completed Phase 1 and 2 of the Class EA study process. This study will complete Phase 3 and 4:



Site Constraints/Design Considerations

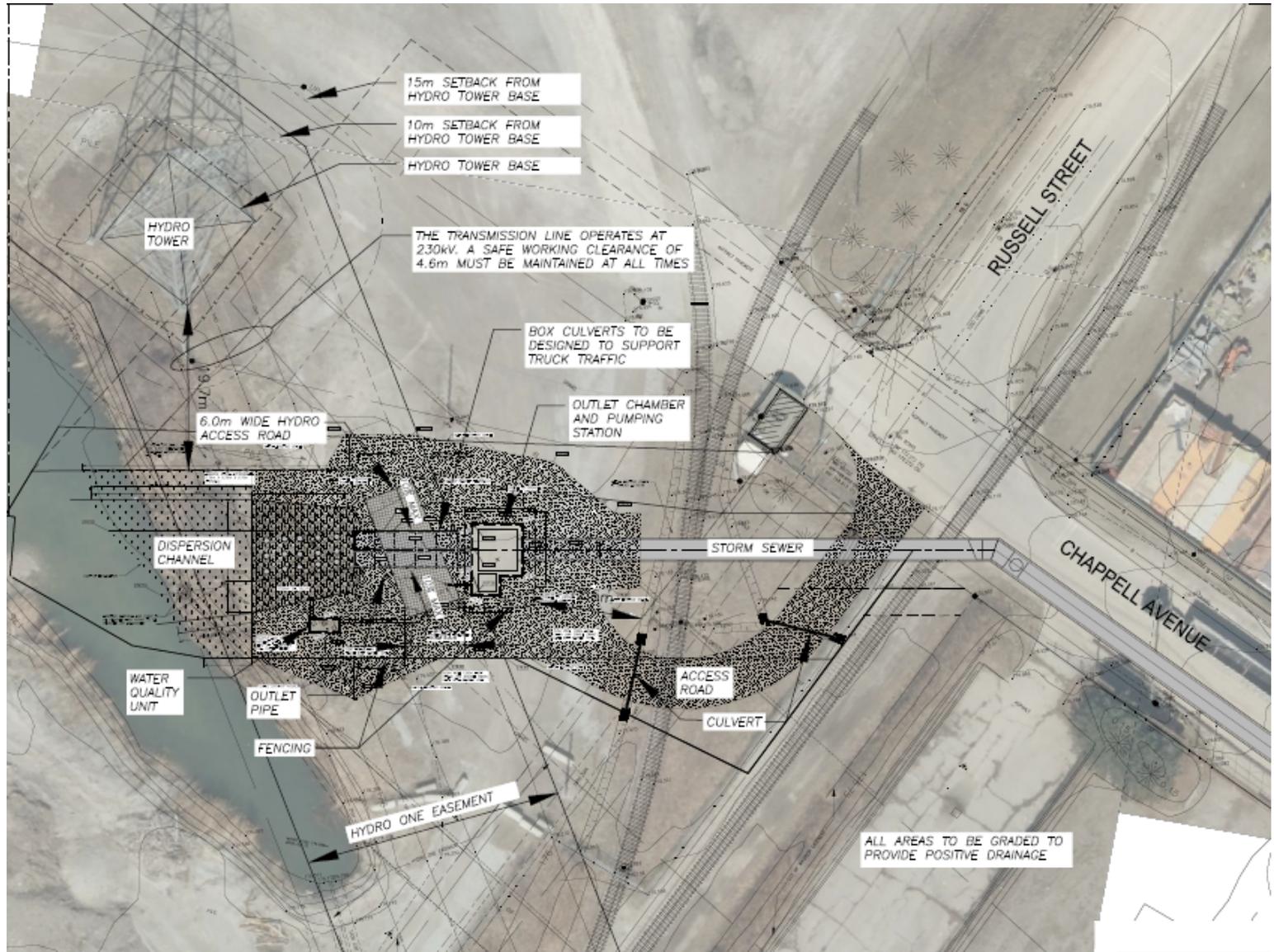
The following considerations have been included in the development of design alternatives:

- Outlet Chamber and Pump Station footprint requirements
- Culvert locations
- Dispersion channel location
- Access – during and post construction
- Permanent and temporary easement requirements

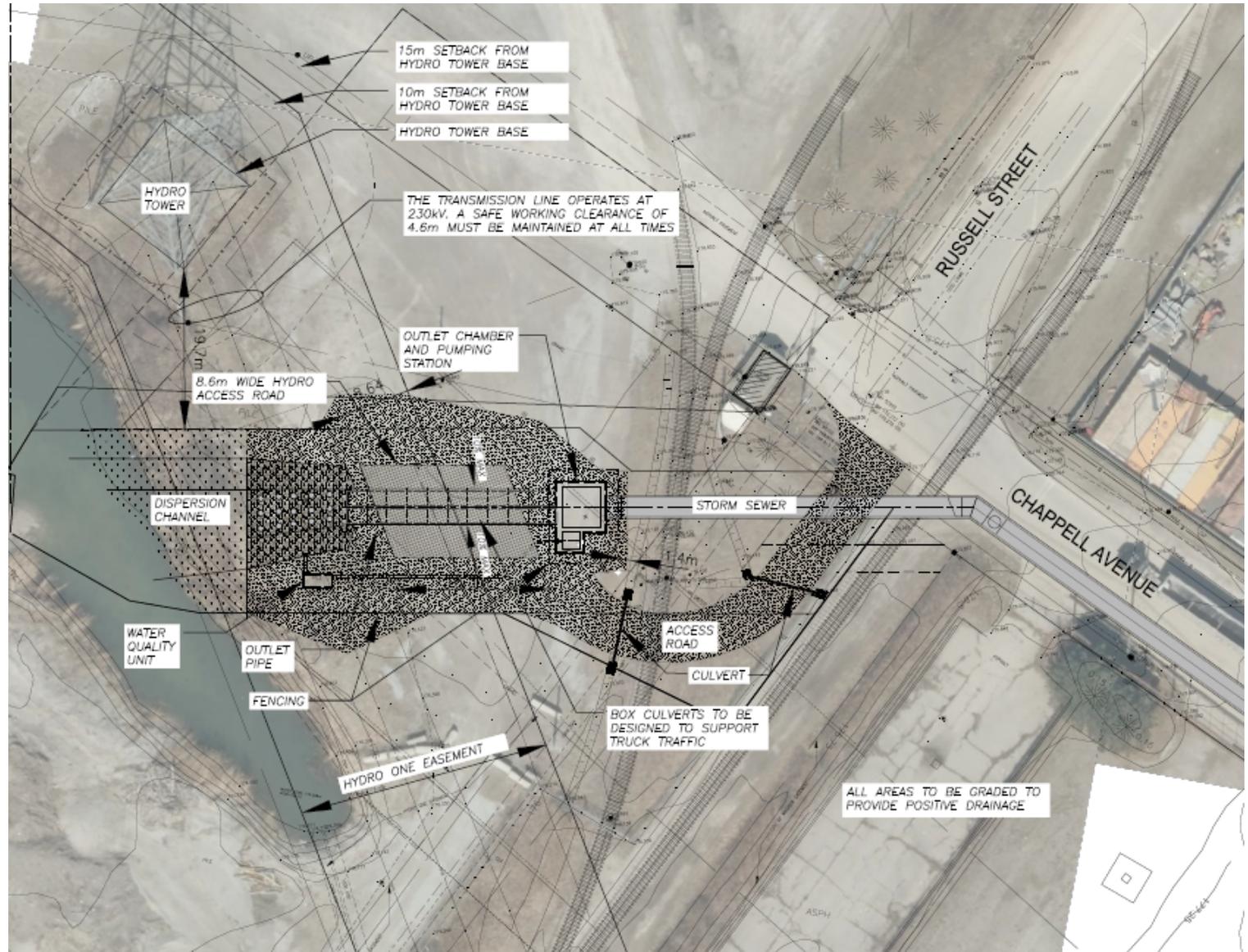
Three design alternatives were developed, including:

- Option 1: Outlet chamber close to hydro easement
- Option 2: Outlet chamber close to rail line
- Option 3: Outlet chamber close to existing office building
- Option 4: Outlet chamber close to roadway

Option 1: Outlet chamber close to hydro easement



Option 2: Outlet chamber close to rail line

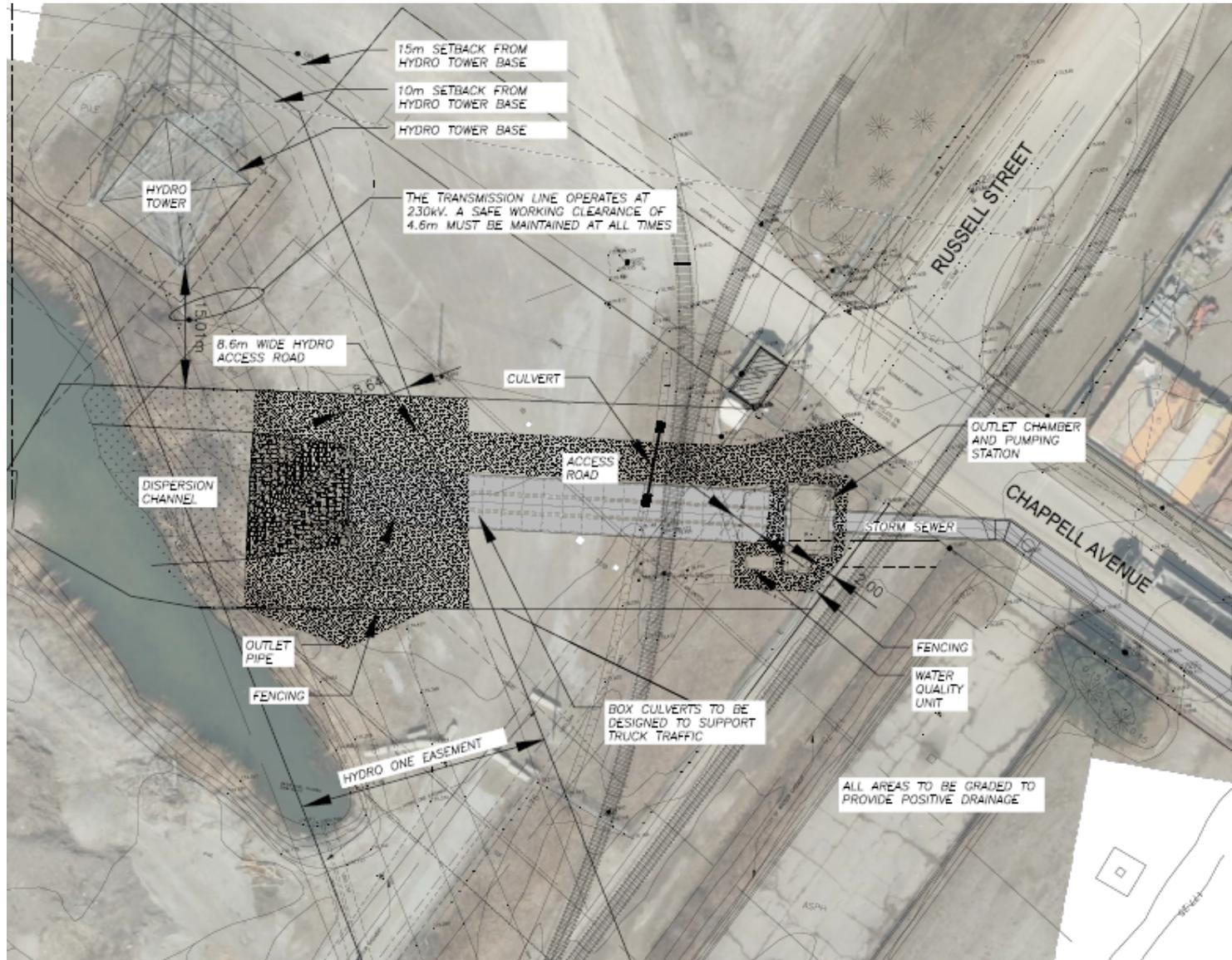


Option 3:

Outlet chamber close to existing office building

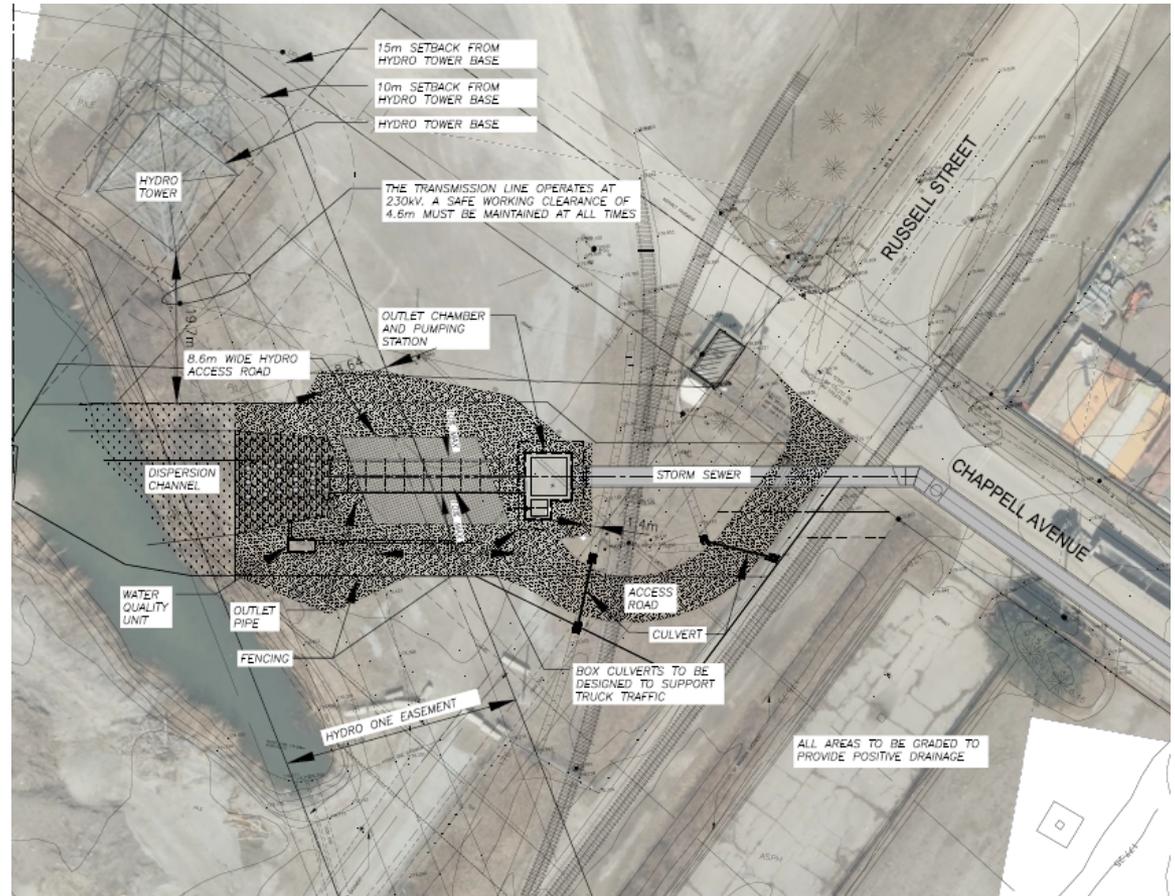


Option 4: Outlet chamber close to Chappell Ave.



Preferred Alternative Design Concept

Based on an evaluation and comments received from key stakeholders (property owners, Essex Terminal Railway, Essex Region Conservation Authority, Hydro One), Option 2 (Outlet chamber close to rail line) was selected as the preferred alternative design concept.



Next Steps

- Draft Environmental Study Report (ESR)
- Notice of Study Completion & Publish ESR for 30-day Review Period

Contact Information



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